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IDAHO
DEPARTMENT OF FISH AND GAME

Rod Sando, Director

FEDERAL AID IN SPORT FISH RESTORATION

FISHERY MANAGEMENT PROGRAM
F-71-R-24

ANNUAL FISHERIES MANAGEMENT PERFORMANCE REPORTS*
1999

Project I. Surveys and Inventories
Project II. Technical Guidance
Project III. Habitat Management
Project IV. Population Management
Project V. Coordination

*Copies of complete reports available from Idaho Department of Fish and Game, PO Box 25, Boise, ID 83707

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DEPARTMENT OF FISH AND GAME

Rod Sando, Director

Federal Aid in Sport Fish Restoration
1999 Annual Performance Report
Program F-71-R-24

REGIONAL FISHERIES MANAGEMENT INVESTIGATIONS
PANHANDLE REGION (Subprojects I-A, II-A, III-A)

PROJECT I.	SURVEYS AND INVENTORIES
Job a.	Panhandle Region Mountain Lakes Investigations
Job b.	Panhandle Region Lowland Lakes Investigations
Job c.	Panhandle Region Rivers and Streams Investigations
PROJECT II.	TECHNICAL GUIDANCE
PROJECT III.	HABITAT MANAGEMENT

By

Jim Fredericks, Regional Fishery Biologist
Mark D. Liter, Regional Fishery Biologist
Ned Horner, Regional Fishery Manager

1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-A Panhandle Region
Job No.:	a	Title:	Mountain Lakes Investigations

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

The Idaho Department of Fish and Game (Department) stocks approximately 50 mountain lakes in the Panhandle Region to provide diverse fishing opportunities. In recent years we have identified the need for an improved record of the number and size of all mountain lakes in the region, and for productivity-based stocking guidelines to optimize density and growth rates. Our objectives were to: 1) identify the total number of stocked and unstocked mountain lakes in the Panhandle Region; 2) refine existing surface area estimates of mountain lakes in the stocking program; and 3) develop a model to optimize fish growth and abundance by adjusting stocking rates based on lake productivity and size. We used 1:24,000 (7.5 minute) United States Geological Survey (USGS) topographical maps and a digital planimeter to enumerate all lakes with a surface area of at least 0.5 ha and above 1,000 m elevation. We counted 124 lakes in the Panhandle Region that met these criteria. Of these, the Department is currently stocking 49 on a regular basis and 75 are not stocked, or have not been stocked for many years. We then corrected the existing surface area estimates listed in the stocking records. There was no consistent trend to under or overestimate area; however, comparisons indicated that the existing area estimates of many lakes were inaccurate. The inaccurate area records have obviously translated into erroneous estimates of stocking density. We surveyed 14 lakes in 1999 and used available data from two lakes surveyed in past years. We assessed several variables related to fish growth, and then developed a multiple regression model using elevation and stocking rate as independent variables and cutthroat trout *Oncorhynchus clarki* age-at-length as a dependent variable. We found the model was useful in predicting growth, with a multiple r-value of 0.78, an r^2 value of 0.62 and an adjusted r^2 value of 0.54. We then used the regression model to plot curves depicting the relationships between stocking rates, elevation, and age-at-length. We developed guidelines to adjust stocking rates based on elevation that will optimize both growth and densities of cutthroat trout in Panhandle Region mountain lakes.

Authors:

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1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-A Panhandle Region
Job No.:	b	Title:	Lowland Lake Investigations

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

A midwater trawl was used to estimate the kokanee *Oncorhynchus nerka* population in Coeur d'Alene Lake in July. Trawl results indicated record low numbers of adult kokanee, with the total population of age-3 fish estimated at 55,100, or 6 fish/ha. We estimated 974,000 age-1 and 270,000 age 2 kokanee. The estimated population of age-0 kokanee was slightly over 4 million fish. The standing stock of kokanee was 6.54 kg/ha, and is much improved over the 1998 estimate of 1.7 kg/ha. Kokanee fry collected in the trawl ranged from 30 mm to 70 mm TL, age-1 kokanee ranged from 80 mm to 200 mm, age-2 fish ranged from 180 mm to 270 mm, and age-3 kokanee ranged from 260 mm to 320 mm.

We counted 12 chinook salmon *O. tshawytscha* redds in the Coeur d'Alene River drainage and none in the St. Joe River. We estimated an additional five chinook salmon redds in Wolf Lodge Creek, based on observed redds and kelts. All redds were left undisturbed to provide natural production. We stocked 25,000 age-0 chinook salmon at the Mineral Ridge boat ramp. Harvested chinook salmon in 1999 were smaller than fish of the same age in past years. Age-3 chinook in August of 1999 averaged 750 mm (TL) and weighed 5.2 kg. By comparison, age-3 chinook in August of 1990 averaged 880 mm in length and weighed approximately 8.8 kg.

A midwater trawl was used to estimate the kokanee population in Spirit Lake in July. We estimated a total kokanee population in Spirit Lake of 381,800 fish. Age-3 kokanee ranged from 210 mm to 270 mm at the time of trawling, and the population was estimated at 34,800 fish, or 61 fish/ha. Age-2 kokanee ranged from 180 mm to 240 mm, and the population was estimated at 50,400. The age-1 kokanee ranged from 130 mm to 180 mm. The age-1 population was the lowest estimate since trawling began in 1981 at only 9,700 fish.

Total angling effort on Spirit Lake from January through September 1999 was estimated at 82,000 h. Kokanee comprised the vast majority of fish creeled with an estimated total harvest of 161,553 fish. Nearly half of the total effort and 85% of the kokanee catch was during the ice-fishery. Comparison with the 1992 creel survey indicates an increase in effort and harvest.

The Priest Lake volunteer angler tagged an additional 239 lake trout *Salvelinus namaycush*. Fish ranged from 280 mm to 560 mm (TL), with a mean size of 431 mm. A total of 20 previously tagged lake trout were reported in 1999. All had been tagged in Priest Lake between 1980 and 1999. Growth ranged from 0 cm to 3.5 cm/year, with an average annual growth of 1.3 cm/year.

We conducted a standardized survey of Hauser Lake to assess changes in the fish community since the addition of tiger muskie *Esox lucius x E. masquinongy* and channel catfish *Ictalurus punctatus* beginning in 1990. As expected, channel catfish and tiger muskie comprised a much greater portion of the sample weight than in 1992. We saw no evidence that the yellow perch *Perca flavescens* and black crappie *Pomoxis nigromaculatus* populations have been negatively affected by channel catfish and/or tiger muskie. Both numerically and by weight, yellow perch comprised similar portions of the sample in 1999 as in 1992, and black crappie actually comprised a much greater portion of the sample in 1999 than

in 1992. Rainbow trout *O. mykiss*, pumpkinseeds *Lepomis gibbosus*, green sunfish *Lepomis cyanellus*, and brown bullheads *Ameiurus nebulosus* all comprised very similar portions of the 1992 and 1999 samples. The only species that showed a marked decline in relative abundance since 1992 were largemouth bass *Micropterus salmoides* and tench *Tinca tinca*.

We used gill nets to capture lake trout from Upper Priest Lake in June and July. We netted and removed a total of 321 lake trout in the five netting efforts. Mean catch rate throughout the 1999 effort was similar to the catch rate in the fall of 1998, and only slightly lower than the cumulative catch rate throughout the 1998 effort. We incidentally netted 15 bull trout *S. confluentus* and had no bull trout mortality. We saw no evidence of shifting size structure due to high exploitation in 1998, and the lake trout to bull trout ratio was not indicative of a substantial lake trout population reduction. The 1999 gillnetting results confirmed the importance of controlling lake trout immigration in the Thorofare if reduction efforts are to be effective.

We used gill nets and electrofishing equipment to evaluate the extent and timing of native and non-native species use of the Thorofare. We captured a total of 12 lake trout, 29 westslope cutthroat trout *O. clarki lewisi*, and one bull trout. Other species captured included northern pikeminnow *Ptychocheilus oregonensis*, mountain whitefish *Prosopium williamsoni,* tench, largescale sucker *Catostomus macrocheilus*, peamouth *Mylocheilus caurinus*, and yellow perch. Ten of the 12 lake trout were caught during night sets in October when water temperature was around 8°C. Cutthroat trout catch-per-unit-of-effort (CPUE) was highest during dusk hours of the month of August. The single bull trout was caught during daylight hours of September, when water temperature was 16°C.

We used backpack electrofishing equipment to conduct follow-up electrofishing surveys of Ruby and Rock creeks to assess effectiveness of 1998 brook trout *S. fontinalis* suppression efforts. In Rock Creek, brook trout comprised 23% of the total catch in 1999 compared with 38% in 1998; and westslope cutthroat trout comprised 75% of the catch in 1999 compared with 60% in 1998. In Ruby Creek, brook trout comprised 54% of the catch in 1999 compared with 81% of the catch in 1998; and cutthroat trout comprised 46% of the catch in 1999 compared with 19% in 1998. Despite the statistically significant improvements in the species compositions, the shift in relative abundance of brook trout and cutthroat trout will probably be short-lived and is not likely biologically significant.

Authors:

Jim Fredericks
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1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-A Panhandle Region
Job No.:	c	Title:	Rivers and Streams Investigations

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

We counted 712 bull trout *Salvelinus confluentus* redds in the Pend Oreille Lake drainage in 1999. A total of 58 redds were counted in the upper Priest Lake drainage, 69 redds were counted in the upper St. Joe River drainage, and 17 bull trout redds were counted in the upper Little North Fork Clearwater River drainage.

We collected a total of 874 salmonids with combined electrofishing and angling efforts in the Moyie River in 1999. Mountain whitefish *Prosopium williamsoni* were the most abundant species captured, comprising 74% of the total catch. Age and growth determinations were made on scales from 30 rainbow trout *Oncorhynchus mykiss* ranging from 116 mm to 507 mm TL. Wild rainbow trout and brook trout *S. fontinalis* comprised 14% and 10% of the total catch, respectively. Based on scale analysis, rainbow trout typically achieve 200 mm at age-3 and 390 mm at age-6. Relative Stock Density-13 (RSD) was 20.6% for wild rainbow trout while RSD-10 for brook trout was 37%. Estimates of return-to-creel for floy-tagged wild rainbow trout and brook trout in the Moyie River were 2.3% and 3.4%, respectively. Hatchery rainbow stocking in the Moyie River was discontinued in 1999 due to poor return rates and concerns from Canadian fishery managers about Idaho Department of Fish and Game (Department) stocking Infectious Pancreatic Necrosis (IPN) positive fish from Clark Fork Hatchery into the Moyie system.

We electrofished the Coeur d'Alene River from the old railroad bridge above I-90 downstream to the Cataldo boat ramp during June 1999. Mountain whitefish were the most numerous species captured comprising 46% of the catch. A total of 286 westslope cutthroat trout *O. clarki lewisi* were sampled representing 44% of the two-night electrofishing catch. Forty-one cutthroat trout and cutthroat/rainbow trout hybrids ranging from 352 mm 485 mm were tagged with reward tags in 1999. Estimated exploitation of cutthroat trout was 17% in 1999.

Authors:

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Regional Fishery Manager

1999 ANNUAL PERFORMANCE REPORT

State of: Idaho Program: Fisheries Management F-71-R-24

Project II: Technical Guidance Subproject: II-A Panhandle Region

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Panhandle Region fishery management personnel provided private individuals, organizations, public schools, and state and federal agencies with technical review and advice on various projects and activities that affect the fishery resources in northern Idaho. Technical guidance also included numerous angler informational meetings, presentations, and letters, continuation of the Panhandle Region portion of the 1-800 ASK-FISH program, and fishing clinics.

Author:

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1999 ANNUAL PERFORMANCE REPORT

State of: Idaho Program: Fisheries Management F-71-R-24

Project III: Habitat Management Subproject: III-A Panhandle Region

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

There were no habitat management related activities in the Panhandle Region during this contract period.

Author:

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DEPARTMENT OF FISH AND GAME

Rod Sandо, Director

Federal Aid in Sport Fish Restoration
1999 Annual Performance Report
Program F-71-R-24

REGIONAL FISHERIES MANAGEMENT INVESTIGATIONS
CLEARWATER REGION (Subproject I-B)

PROJECT I. SURVEYS AND INVENTORIES
Job a. Clearwater Region Mountain Lakes Investigations
Job b. Clearwater Region Lowland Lakes Investigations
Job c. Clearwater Region Rivers and Streams Investigations

By

Ed Schriever, Regional Fishery Biologist
Jody Brostrom, Regional Fishery Biologist
Patrick D. Murphy, Fishery Technician
Tim Cochnauer, Regional Fishery Manager

1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-B Clearwater Region
Job:	a	Title:	Mountain Lakes Investigations

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Seventeen mountain lakes were surveyed in the Clearwater National Forest from July to September 1999. An additional five lakes in the N.F. Clearwater River drainage were re-surveyed three times each as part of two ongoing graduate projects. These projects are investigating the impacts of introduced fish on zooplankton and amphibian communities. Of the 17 lakes surveyed, five were resurveys because of inconclusive information obtained initially. None of the lakes surveyed in 1999 are recommended for stocking with hatchery-reared trout.

Authors:

Tim Cochnauer
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Fishery Technician

1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-B Clearwater Region
Job:	b	Title:	Lowland Lakes Investigations

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Stocking approximately 1,080,482 fingerling, and 339,603 catchable-size fish into lowland lakes, reservoirs and ponds enhanced resident fish populations and sport fishing in the Clearwater Region. Clearwater Region personnel transplanted 404 bluegill sunfish *Lepomis macrochirus*, and 165 largemouth bass *Micropterus salmoides* to Moose Creek Reservoir for population re-establishment. These fish were collected from Spring Valley Reservoir and Mann Lake.

Creel census surveys were conducted on seven lowland lakes in the Clearwater region in 1999. Anglers spent an estimated 127,867 hours fishing to catch 153,258 fish. These fish species included hatchery rainbow trout *Oncorhynchus mykiss,* brook trout *Salvelinus fontinalis,* splake trout *Salvelinus fontinalis* x *S. namaycush,* black crappie *Pomoxis nigromaculatus,* largemouth bass *Micropterus salmoides,* smallmouth bass *Micropterus dolomieu,* bluegill, pumpkinseed *L. gibbosus,* yellow perch *Perca flavescens,* and black bullhead catfish *Ameiurus melas.* These lowland lakes supported an average of 126 hours of angling effort per hectare in 1999 (311 hours per acre). Return rate of catchable-size rainbow trout stocked in these lakes was estimated at an average of 50 percent.

Authors:

Ed Schriever
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1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management
Project I:	Surveys and Inventories	Subproject:	I-B Clearwater Region
Job:	c	Title:	Rivers and Streams Investigations

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Clearwater region fishery management personnel snorkeled or coordinated data collection for 138 stream transects within the Clearwater, Salmon and Snake river drainages to obtain data for the long-term database. Chinook salmon *Oncorhynchus tshawytscha* juvenile numbers were lower than in previous years. Twenty-three adult chinook salmon redds were counted in traditional aerial spawning ground counts in the Lochsa and Selway rivers, and five were counted in the South Fork Clearwater drainage. We sampled kamloop rainbow trout *Oncorhynchus mykiss* from the lower Clearwater River and found no fish in diet analysis. We collected rainbow trout on the Salmon River. No fish or fish parts were identified in the contents of hatchery origin trout stomachs. We collected westslope cutthroat trout *Oncorhynchus clarki lewisi* in the mainstem North Fork Clearwater River from Aquarius (rkm 104.4) up to Kelly Forks (rkm 184.5) using traditional hook and line techniques and tagged them with jaw tags. We counted 660 kokanee *O. nerka* spawners in three index tributaries of the North Fork Clearwater River.

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IDAHO
DEPARTMENT OF FISH AND GAME

Rod Sando, Director

Federal Aid in Sport Fish Restoration
1999 Annual Performance Report
Program F-71-R-24

REGIONAL FISHERIES MANAGEMENT INVESTIGATIONS
SOUTHWEST REGION - MCCALL (Subprojects I-C, II-C, III-C)

PROJECT I.	SURVEYS AND INVENTORIES
Job a.	McCall Region Mountain Lakes Investigations
Job b.	McCall Region Lowland Lakes Investigations
Job c.	McCall Region Rivers and Streams Investigations
PROJECT II.	TECHNICAL GUIDANCE
PROJECT III.	HABITAT MANAGEMENT

By

Paul Janssen, Fishery Biologist
Lauri Hostettler, Fishery Biologist Aid
Don Anderson, Regional Fishery Manager
Kimberly A. Apperson, Regional Anadromous Fishery Biologist
Kris A. Buelow, Fishery Technician

1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-C Southwest Region - (McCall)
Job:	a	Title:	Mountain Lakes Investigation

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Fish population status and/or physical habitat parameters were surveyed and stocking strategies were assessed on five mountain lakes in 1999.

Rainbow trout *Oncorhynchus mykiss* were collected from Crater (07-447) and Fish Lake #3 (07-444). Cutthroat trout *O. clarki lewisi* were collected from Fish Lake #1 (07-440), Fish Lake #3 (07-444) and Middle Lake (07-445). No fish were collected from Fish Lake #2 (07-443); however frogs and salamanders were thriving.

Authors:

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Paul Janssen
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Don Anderson
Regional Fishery Manager

1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-C Southwest Region - (McCall)
Job:	b	Title:	Lowland Lakes Investigations

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

We completed holiday shore angler and boat counts on Cascade Reservoir. We completed a standard lowland lake survey on C. Ben Ross Reservoir which revealed that largemouth bass *Micropterus salmoides* were the most abundant fish in the reservoir in terms of biomass. Largemouth bass reached 12 inches in 3-4 years.

We completed a Memorial Day weekend creel survey on Horsethief Reservoir, which revealed that 4,756 angler hours were spent to catch 2,358 fish of which 58% were yellow perch *Perca flavescens* and 38% were rainbow trout *Oncorhynchus mykiss*.

We estimated that there were 339 and 374 westslope cutthroat trout *O. clarki lewisi* less than and greater than 250 mm in Fish Lake.

Authors:

Paul Janssen
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Don Anderson
Regional Fishery Manager

1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-C Southwest Region - (McCall)
Job:	b	Title:	Lowland Lakes Investigations: Cascade Reservoir, Yellow Perch Investigations

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Since 1995, the yellow perch *Perca flavescens* population in Cascade Reservoir had become severely depressed. Work completed in 1998 revealed there had been no perch recruitment since the early 1990s. We conducted studies in 1999 to track life histories and the fate of age-0 perch. We also examined present water quality, historical water quality, plankton abundance, and benthic invertebrate abundance. Age-0 perch densities increased significantly in 1999 with a 6.8 fold increase in trawl catch rates over 1998. Virtually all age-1 and age-2 perch present in June had vanished by August. We did not see any significant sudden drops in age-0 perch densities in 1999. None of the habitat and food parameters examined in 1999 explained the extremely high mortality rates of juvenile perch observed in 1998 and early 1999. Northern pikeminnow *Ptychocheilus oregonensis* predation on perch may be impeding perch recovery.

Authors:

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1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-C Southwest Region - (McCall)
Job:	a	Title:	Rivers and Streams Investigation

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Temperature recorders monitored the upper Little Salmon River drainage throughout the summer. Mean daily temperatures peaked at 22°C in late July. The highest daily temperature recorded was 26.3°C. The highest minimum daily temperature was 19.1°C, with only one occurrence. Summer river temperatures were noticeably lower than in 1998.

A single temperature recorder in the North Fork of the Payette River, just below the confluence with Fisher Creek, at the United States Geologic Service (USGS) gauge, recorded temperatures throughout the summer. Average daily temperatures remained below 18.8°C. The highest maximum daily temperature recorded was 22.4°C. The highest minimum daily temperature recorded was 16.2°C.

Anglers were guided by Wapiti Meadows Ranch Outfitters in a three-mile section of the South Fork Salmon River below the confluence with the Secesh River. All fishing was catch-and-release. Steelhead/redband trout *Oncorhynchus mykiss*, cutthroat trout *O. clarki*, and chinook salmon *O. tshawytscha* yearlings were reported in the catch. Catch rates for all species combined were 1.6 fish/hr.

Angling was done by Idaho Department of Fish and Game (Department) personnel on the lower eight miles of Big Creek, from Taylor Ranch to its confluence with the Middle Fork Salmon River. All fishing was catch-and-release. Steehead/redband trout and cutthroat trout *Oncorhynchus clarki* were caught. Bull trout *Salvelinus confluentus*, mountain whitefish *Prosopium williamsoni*, and juvenile chinook *O. tshawytscha* salmon were observed during snorkel surveys, but none were captured during angling. Total daily catch rates for August 2nd and 3rd, 1999 were 4.8 fish/h and 9.03 fish/h, respectively.

Authors:

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1999 ANNUAL PERFORMANCE REPORT

State of: Idaho Program: Fisheries Management F-71-R-24

Project II: Technical Guidance Subproject: II-C Southwest Region - (McCall)

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

McCall Subregion fishery management personnel responded to more than 300 requests and opportunities for technical input. Comments were provided to state and federal agencies on proposed activities for which they have regulatory authority. Advice and technical assistance were provided to private businesses and the public on activities associated with fish, or having impacts on fish populations or fish habitat. The major topics of involvement included stream channel alterations, Idaho Outfitters and Guides licensing, private pond permits, and land management planning. We provided data and technical advice to an increased number of fisheries consultants. The listing of several native salmonids under the Endangered Species Act (ESA) has increased the number of request for technical input.

Regional fishery personnel continued participation on a technical advisory committee for the Big Payette Lake Water Quality Council. The group conducted studies and developed a comprehensive technical report identifying nutrient and bacterial contamination sources and recommended remedial action. The technical report resulted in a lake management plan and an implementation program, which were passed into legislation in the 1998 session.

Fishery personnel participated on a technical advisory committee for the Cascade Restoration Project to improve water quality and fish habitat in Lake Cascade. Lake Cascade is listed as a water quality limited water by the Idaho Department of Environmental Quality (IDEQ), not fully supporting beneficial uses including coldwater biota. The technical advisory committee identified phosphorus sources and developed reduction measures. A Total Maximum Daily Load (TMDL) was established that would result in a 37% reduction in phosphorus loading. Source plans were prepared and an Implementation Plan was drafted.

McCall regional personnel contributed important fishery sections to Idaho Department of Water Resources Comprehensive Basin Management Plans for the Payette River basin and the Little Salmon River basin. We also participated on other technical advisory committees.

Two large-scale resort developments required ongoing review and input. West Rock Resort is proposed for the west side of Lake Cascade and could potentially double the population of Valley County. We provided technical review on several components of the proposal. The expansion of Shore Lodge on Payette Lake also required numerous contacts with proponents and opponents. Our participation minimized impacts to the water quality in Payette Lake, impacts to fish habitat immediately downstream in the North Fork Payette River, and protected the water source for the McCall Fish Hatchery from turbidity and accidental chemical/fuel spills.

We also gave numerous presentations to schools, sporting groups, and civic organizations. We answered many questions from the angling public on fishing opportunities, regulations, techniques, and specific water. We maintained fishing reports for the Idaho Department of Fish and Game (Department) Internet Homepage and 1-800-ASK-FISH.

Author:

Donald Anderson
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1999 ANNUAL PERFORMANCE REPORT

State of: Idaho Program: Fisheries Management F-71-R-24

Project III: Habitat Management Subproject: III-C Southwest Region - (McCall)

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

McCall area fishery personnel participated in many forums for the restoration, maintenance, and enhancement of fish habitat and water quality. This participation included membership on several technical advisory committees for state and federal planning efforts. Fishery personnel commented on more than 300 requests for input for technical advice. Many proposed land management activities required Idaho Department of Fish and Game (Department) review to assure fish habitat consideration. Other natural resource agencies requested contributions to planning documents regarding fishery resources and habitat. Much of our participation is described in the Technical Guidance section of this annual report, but there is considerable overlap between technical guidance and habitat management.

The development of community fishing ponds increases fish habitat, as well as angler opportunity and involvement in the sport. The Department initiated the planning and development of community fishing ponds in Council and in Cascade. Both ponds are scheduled for construction within city parks and have strong community support. Cost sharing among the Department, the cities, and private interests demonstrated the popularity of these ponds. Another existing pond was opened to public fishing as a result of negotiations with the new owner of a large golf resort and residential development.

Fisheries personnel identified a need for screening juvenile and adult rainbow trout *Oncorhynchus mykiss* out of four ditches on Lake Fork, a tributary to Lake Cascade. A low-tech, flat screen and a fishway were designed and constructed as part of the new diversion structure at Mahala Ditch. Various State and Federal agencies cost-shared with the irrigators to jointly fund this project. Efforts to reduce fish loss at the other three canal diversions were initiated and cooperation with the irrigators will continue to be pursued.

Minimum stream flows are necessary to maintain fish habitat, but Idaho water law and over-appropriated water rights make adequate flows difficult, if not impossible, to obtain. Fishery personnel have negotiated with local irrigators to allow some water to remain in streams whenever the irrigators can accommodate fish needs and still meet irrigation commitments. Although far from adequate, these informal minimum flows greatly improve on the conditions when the streams are otherwise totally dewatered for irrigation needs.

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IDAHO
DEPARTMENT OF FISH AND GAME

Rod Sando, Director

Federal Aid in Sport Fish Restoration
1999 Annual Performance Report
Program F-71-R-24

REGIONAL FISHERIES MANAGEMENT INVESTIGATIONS
SOUTHWEST REGION – NAMPA (Subprojects I-D, II-D, III-D)

PROJECT I.	SURVEYS AND INVENTORIES
Job a.	Southwest Region Mountain Lakes Investigations
Job b.	Southwest Region Lowland Lakes Investigations
Job c.	Southwest Region Rivers and Streams Investigations
Job d.	Southwest Region Salmon and Steelhead Investigations
PROJECT II.	TECHNICAL GUIDANCE
PROJECT III.	HABITAT MANAGEMENT

By

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1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-D Southwest Region – (Nampa)
Job No.:	a	Title:	Mountain Lakes Investigations

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

No mountain lake sampling was conducted in 1999.

Author:

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1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-D Southwest Region – (Nampa)
Job No.:	b	Title:	Lowland Lakes Investigations

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Two regional waters were sampled with a multiple gear lowland lake sampling strategy, which included use of pairs of experimental gill nets, trap nets, and boat electrofishing. Brownlee and Paddock reservoirs were sampled in this manner.

Beach's Pond, Mountain Home Reservoir, and Indian Creek Reservoir were sampled with electrofishing only.

Blacks Creek and Crane Creek reservoirs were sampled with trap nets only.

Bybee, Little Blue Creek, Shoofly, Payne Creek, Grasmere, and Blackstone reservoirs were sampled with experimental gill nets and trap nets.

Claytonia Pond was renovated with rotenone and restocked with warmwater species.

Zooplankton samples were taken from C.J. Strike, Deadwood, Manns Creek, Sagehen, and Lucky Peak reservoirs.

Author:

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1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-D Southwest Region – (Nampa)
Job No.:	c	Title:	Rivers and Streams Investigations

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

The Payette River was surveyed below Black Canyon Reservoir to evaluate angling opportunities and float boat access areas. Angling was conducted between Black Canyon Dam and the Birding Island Access near New Plymouth.

Underwater video equipment was installed in the Kirby Dam fish ladder to document migrating bull trout *Salvelinus confluentus*.

The Weiser River was sampled with electrofishing from Cambridge to the confluence of the Weiser and Snake rivers.

Sections of W.F. Long Tom Creek were sampled to assess the redband trout *Oncorhynchus mykiss gairdneri* reintroduced in 1996. Stream channel and habitat measurements were also recorded to document relative changes in the riparian area associated with changes in grazing management.

A creel survey was completed on the South Fork Payette River upstream of the Deadwood River. The survey also documented angler use of the newly constructed Lowman Nature Ponds. A series of management questions were also asked of surveyed anglers. Estimated return rate of stocked hatchery rainbow trout *O. mykiss* in the S. F. Payette River was 24.8% and the estimate return of rainbow trout in the pond was 99%. Angler use of the whole upper S.F. Payette River area was approximately equal to the angler use during a previous survey conducted in 1992. A noticeable shift of angling pressure occurred from the hatchery stocked trout zone on the river to the ponds.

Authors:

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1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-D Southwest Region – (Nampa)
Job No.:	d	Title:	Salmon and Steelhead Investigations

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Salmon spawning ground surveys were conducted in Bear Valley, Elk, and Sulphur Creek trend areas on August 23-25, 1999. Salmon redds numbered 33, 10, and 0 in Bear Valley, Elk, and Sulphur Creek trend areas, respectively.

Additional data on Southwest Region salmon and steelhead investigations are incorporated in a separate, statewide Salmon and Steelhead Investigations report.

Author:

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1999 ANNUAL PERFORMANCE REPORT

State of: Idaho Program: Fisheries Management F-71-R-24

Project II: Technical Guidance Subproject: II-D Southwest Region – (Nampa)

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Regional fishery personnel responded to a large number of public requests for fishing information. Biweekly ASK FISH reports were prepared and forwarded to vendors for distribution. Regional fishery staff consulted with the Environmental Staff Biologist for requests on fish population status and concerns on a multitude of projects in the Southwest Region of Idaho Department of Fish and Game (Department). Numerous requests for fish stocking advice and/or rates were received from local Treasure Valley residents.

Regional staff developed and implemented a renovation of the Horseshoe Bend Mill Pond located just outside of Horseshoe Bend. The project involved reconstruction of the water intake from the Payette River, reconfiguring the banks for better fishing access, and installing a water pump to move water into the pond for late summer.

Regional fishery personnel participated in the Bull Trout *Salvelinus confluentus* Recovery Unit Team for Southwest Idaho. We also participated in planning for the reconstruction of Arrowrock Dam with the U.S. Bureau of Reclamation.

Author:

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Regional Fishery Manager

1999 ANNUAL PERFORMANCE REPORT

State of: Idaho Program: Fisheries Management F-71-R-24

Project III: Habitat Management Subproject: III-D Southwest Region – (Nampa)

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Habitat measurements were taken on sections of West Fork Long Tom Creek within the area of a cooperative stream and riparian pasture grazing complex. Standard Idaho Department of Fish and Game (Department) stream habitat parameters were measured and compared to previous data. Bank stability, counts of willow stems per 100 feet, greenline vegetation, and linear distance of willow canopy were measured. Results are reported in Project I, Job c of this report.

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DEPARTMENT OF FISH AND GAME

Rod Sando, Director

Federal Aid in Sport Fish Restoration
1999 Annual Performance Report
Program F-71-R-24

REGIONAL FISHERIES MANAGEMENT INVESTIGATIONS
MAGIC VALLEY REGION (Subprojects I-E, II-E, III-E)

PROJECT I.	SURVEYS AND INVENTORIES
Job a.	Magic Valley Region Mountain Lakes Investigations
Job b.	Magic Valley Region Lowland Lakes Investigations
Job c.	Magic Valley Region Rivers and Streams Investigations
PROJECT II.	TECHNICAL GUIDANCE
PROJECT III.	HABITAT MANAGEMENT

By

Charles D. Warren, Regional Fishery Biologist
Fred Partridge, Regional Fishery Manager
Karen A. Frank, Fishery Technician

1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-E Magic Valley Region
Job:	a	Title:	Mountain Lakes Investigations

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Four lakes within the South Fork Boise River drainage were surveyed for fish and fish habitat in 1999. Smoky Dome Lakes consist of three lakes or ponds, only the largest of which was surveyed. Smoky Dome Lake had rainbow trout *Oncorhynchus mykiss* present, but they were few in number. These fish were probably of hatchery origin according to stocking records but spawning habitat was fair to excellent. Ross Fork Lakes consist of four lakes all of which were surveyed except Ross Fork # 1. Several smaller ponds in the area were not surveyed. Ross Fork Lake # 2 and # 3 had stocked rainbow trout, cutthroat trout *O. clarki* and hybrids. Ross Fork Lake # 4 had cutthroat trout of hatchery origin in fair numbers. Spawning habitat is of marginal quality for maintaining a fishery in all three lakes.

Authors:

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Fred Partridge
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1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-E Magic Valley Region
Job:	b	Title:	Lowland Lakes Investigations

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Fisheries in Oakley Reservoir and Pioneer Reservoir were investigated in 1999 using standardized lowland lakes survey protocols. Oakley Reservoir was found to have a strong population of rainbow trout *Oncorhynchus mykiss* and walleye *Stizostedion vitreum* although total fish biomass was dominated by Utah sucker *Catostomus ardens*. Yellow perch *Perca flavescens* and spottail shiner *Notropis hudsonius* were also found to be abundant, providing a forage base for piscivorous species. Results of the Pioneer Reservoir investigation indicated moderate numbers of largemouth bass *Micropterus salmoides* present, as well as small numbers of bluegill *Lepomis macrochirus*, pumpkinseed *L. gibbosus* and yellow perch. Total fish biomass at Pioneer Reservoir was dominated by common carp *Cyprinus carpio*

Kokanee *O. nerka* in Anderson Ranch Reservoir were sampled by midwater trawling which indicated approximately 1.4 million age-0 fish present, the highest number of a single year class ever estimated for the reservoir since trawling was first used to assess the population in the 1980s. The annual spawning run abundance trend count indicated a strong 1999 run, but not as high as the run in 1998.

Magic Reservoir brown trout *Salmo trutta* spawning abundance was monitored with a redd count as in previous years. There were 443 redds counted in the Big Wood River which is higher than any previous years' counts.

Water quality samples were taken through the ice at Mormon Reservoir and sent to a water quality analysis laboratory. Results showed a high level of productivity, which may explain the fish kills in intermittent years, dense aquatic vegetation, and good fish growth.

An annual forage fish trend survey was done at Salmon Falls Creek Reservoir, which indicated a low abundance of forage species present. Springtime electrofishing was done to sample walleye for age and growth data. Results show that growth rates for walleye had not slowed down despite low forage abundance.

Four regional reservoirs were sampled for zooplankton quality index. These included Anderson Ranch, Fish Creek, Little Wood River, and Salmon Falls Creek reservoirs.

Author:

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1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-E Magic Valley Region
Job:	c	Title:	Rivers and Streams Investigations

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Twelve regional streams within historic Yellowstone cutthroat trout *Oncorhynchus clarki bouvieri* drainages were investigated in 1999. Fish were sampled from these streams as part of an effort to learn about the status and trends in Yellowstone cutthroat trout populations in Idaho. Comparisons of cutthroat trout population density estimates from surveys done since 1986 were mixed but did not indicate an overall trend up or down in population numbers for the species within the region. Investigations on streams not previously surveyed did not reveal any new populations of cutthroat trout.

Boardman Creek, a tributary to the South Fork Boise River, was investigated and found to have an abundance of bull trout *Salvelinus confluentus*. Smoky Dome Creek, a tributary to Boardman Creek was also sampled and found to have an abundance of bull trout and rainbow trout *O. mykiss*.

Temporary downstream fish migrant traps were put into operation on the East and West forks of the Jarbridge River near their confluence from September through November to trap bull trout. A total of five bull trout were sampled, which is up from one sampled in 1997.

Author:

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1999 ANNUAL PERFORMANCE REPORT

State of: Idaho Program: Fisheries Management F-71-R-24

Project II: Technical Guidance Subproject: II-E Magic Valley Region

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Magic Valley Region fishery management personnel furnished verbal and written comments of technical guidance to other agencies, consultants, and private individuals and organizations. Fishing information was provided to anglers in the form of brochures, angler guides, public meetings, news releases, telephone, email, and in person.

Many miscellaneous activities were commented on, participated in, or otherwise addressed, and numerous meetings regarding fisheries were attended.

Author:

Fred E. Partridge
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1999 ANNUAL PERFORMANCE REPORT

State of: Idaho Program: Fisheries Management F-71-R-24

Project III: Habitat Management Subproject: III-E Magic Valley Region

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Magic Valley Region and Engineering Bureau personnel installed rock drop structures downstream of a culvert barrier on the Feather River to improve migration access for bull trout *Salvelinus confluentus*. Improvements at this site have the potential of opening up more than 32 km of stream above 1,500 m elevation. Additionally, we performed habitat surveys on ten stream sites in bull trout and Yellowstone cutthroat trout *Oncorhynchus clarki bouvieri* streams.

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DEPARTMENT OF FISH AND GAME

Rod Sando, Director

Federal Aid in Sport Fish Restoration
1999 Annual Performance Report
Program F-71-R-24

REGIONAL FISHERIES MANAGEMENT INVESTIGATIONS
SOUTHEAST REGION (Subprojects I-F, II-F, III-F)

PROJECT I.	SURVEYS AND INVENTORIES
Job b.	Southeast Region Lowland Lakes Investigations
Job c.	Southeast Region Rivers and Streams Investigations
PROJECT II.	TECHNICAL GUIDANCE
PROJECT III.	HABITAT MANAGEMENT

By

Richard Scully, Regional Fishery Manager
Jim Mende, Regional Fishery Biologist
Chad Rawlins, Regional Fishery Technician

1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-F Southeast Region
Job:	b	Title:	Lowland Lakes Investigations
Contract Period:	July 1, 1999 to June 30, 2000		

ABSTRACT

We operated a check station at the entrance road to Chesterfield Reservoir and conducted a roving creel survey on the reservoir on January 2, 2000. Our goal was to remove and examine stomach contents of harvested trout that were at least 340 mm long. Trout examined ranged from 345 mm to 515 mm long. The purpose of the examination was to determine if large trout were utilizing Chesterfield Reservoir's expanding Utah chub *Gila atraria* population as forage. Mid-winter was chosen as the time to examine stomachs, as submerged vegetation would be minimal and forage fish should be easiest for trout to capture. Most of the food in the 38 trout stomachs examined was snails, plankton, and midge larvae. No fish remains were found.

We conducted lowland lake surveys on Condie, Twin Lakes, Walcott and Blackfoot reservoirs. The Condie Reservoir survey monitored status of the largemouth bass *Micropterus salmoides*, bluegill *Lepomis macrochirus*, yellow perch *Perca flavescens,* and tiger muskie *Esox x E. masquinongy* populations affected by the trophy bass rule. Proportional stock density (PSD) was 42%, 4%, and 0% for bass, bluegill, and perch, respectively. Competition between bluegill and perch continues to depress growth of these two species.

Twin Lakes Reservoir was renovated in 1994 and restocked with largemouth bass, bluegill, and rainbow trout *Oncorhynchus mykiss* in 1995. We sampled Twin Lakes to see how the warmwater fishery had developed. None of the largemouth bass sampled were over 305 mm; thus bass Proportional Stock Density (PSD) was 0%. Abundant small bass may have benefited growth of bluegill, which had a PSD of 55%. Unfortunately, yellow perch entered from the upstream canals. Perch growth so far however is good in Twin Lakes, with fish over 250 mm in the catch and a PSD in our sample of 57%. In the presence of these other species, rainbow trout have not done well. The largest trout in the 20-fish sample was 344 mm.

We sampled the headwater of Lake Walcott (Reservoir) on the Snake River near Massacre Rocks to determine the fishery status. We also wished to determine the effect of smallmouth bass *Micropterus dolomieu* and channel catfish *Ictalurus punctatus* that were introduced in 1992. The 237 fish sample, in order of abundance, was comprised of Utah chub, Utah sucker *Catostomus ardens*, smallmouth bass, common carp *Cyprinus carpio*, rainbow trout, redside shiner *Richardsonius balteatus*, sculpin, and cutthroat trout *Oncorhynchus clarki*. The newly introduced smallmouth bass comprised 22% of the catch and ranged up to 420 mm in length. Bass condition was excellent, averaging 119%. No channel catfish were caught. Water temperature may be too cool for channel catfish to reproduce and/or for young-of-the-year (YOY) channel catfish to survive their first winter.

We sampled the Blackfoot Reservoir fishery to see if, after four years of abundant precipitation and reservoir volume, trout would occupy a larger percent of the relative species composition than they had in 1991. A gillnet sample in 1991 containing 274 fish was comprised of 79% Utah chubs, 18% Utah suckers, 2.6% rainbow trout and 0.4% cutthroat. The 1999 sample of 1,528 fish caught in gillnets and electrofishing equipment was comprised of 84.5% chubs, 13% suckers, 1.4% rainbow trout, 0.5% yellow perch, 0.5% common carp and 0.1% cutthroat trout. No change in the relative species composition is apparent. A new, illegally introduced species, yellow perch, will likely occupy a greater percent of the relative species composition in the future.

We monitored bass tournaments at American Falls and Glendale reservoirs to examine the quality of these fisheries relative to club-angler catch. Smallmouth bass first appeared in anglers' catches in 1996. The first official bass tournament was held on American Falls Reservoir on June 19, 1999. We asked tournament anglers to record the length of each fish they caught and released. We measured and weighed each fish that they brought into the tournament weigh-in. Twenty anglers fished 190 hours and caught 124 smallmouth bass. Mean bass length caught was 328 mm. PSD was 90%. Relative weight was near 120%.

Glendale Reservoir had general 5-bass, 12-inch minimum size rules until 1992 when rules changed to 2-bass, none under 16-inches. Prior to the rule change, anglers caught few bass over the 12-inch minimum size. We have monitored Glendale Reservoir bass tournaments in most years since the rule change. Predominant size range in the catch increased to 325 mm to 375 mm by 1996 and has stayed there since. We have never recorded a bass in the tournament catches over 430 mm.

Authors:

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1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-F Southeast Region
Job:	c	Title:	Rivers and Streams Investigations

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Fisheries personnel snorkeled fixed transects of St. Charles Creek to monitor trends in Bonneville cutthroat trout *Oncorhynchus clarki*, rainbow trout *Oncorhynchus mykiss,* and brook trout *Salvelinus fontinalis*. We also electrofished some of the same transects to evaluate snorkelers' ability to identify fish species, to correctly estimate fish length, and to compare population estimates.

We conducted an opening-day creel survey on the Snake River below American Falls Dam. This is a high quality hatchery-trout fishery that has special rules to limit harvest of trout over 406 mm long. Of 854 harvested trout examined, 98% were rainbow trout. Of these, 18% were trout that had been stocked into this river reach, as evidenced by adipose-fin clips. Most of the marked trout had been in the river at least one year. Anglers caught an average of 3.8 trout and kept an average of 1.9 trout per person. Of the harvested trout that were at least 305 mm long, 58% were also at least 406 mm long.

Fisheries personnel assisted the University of Wyoming and Utah State University with Bonneville cutthroat trout population studies in the Thomas Fork of the Bear River. We collected 231 cutthroat trout with electrofishing equipment. Some of the larger fish were marked with radio transmitters or Passive Integrated Transponder (PIT) tags. Most of the fish were marked with visual implant tags. Graduate students will document growth, survival, and movement of these fish over the next two years.

We estimated trout population density in sections of Cold, Dempsey, Fish, Pocatello, Rock, Little Blackfoot, Angus and Brush creeks in the Snake River drainage to determine status of Yellowstone cutthroat O. clarki bouvieri. We also estimated trout populations in Home, Canyon, and North creeks in the Bear River drainage to determine status of Bonneville cutthroat trout. We used mark-and-recapture or multiple pass depletion electrofishing methods to estimate the number of trout in sampled sections.

Authors:

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1999 ANNUAL PERFORMANCE REPORT

State of: Idaho Program: F-71-R-24

Project II: Technical Guidance Subproject: II-F Southeast Region

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

We provided input to the Regional Environmental Staff Biologist on activities affecting fish and anglers. We coordinated with personnel of various agencies on hydropower, mining, road building, stream alteration, grazing allotments, National Pollution Discharge Elimination Systems permits, fill/excavation, and other projects. Southeast Region fishery personnel worked with anglers to improve rapport and open communication with agencies and the public.

Authors:

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1999 ANNUAL PERFORMANCE REPORT

State of: Idaho Program: F-71-R-24

Project III: Habitat Management Project: III-F Southeast Region

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Idaho Department of Fish and Game (Department) employees and Southeast Idaho Fly Fisher volunteers maintained two miles of riparian corridor fence along reaches of the upper Portneuf River. We also performed regular repairs to this fence and removed trespassing livestock as needed.

Department employees and Southeast Idaho Fly Fisher volunteers installed 100 m of juniper revetments along a section of the upper Blackfoot River on the Department's Wildlife Management Area (WMA).

Fisheries personnel and volunteers from other agencies and the Shoshone-Bannock tribes conducted habitat surveys on the headwater tributaries of the upper Blackfoot River in late September and early October. These surveys, conducted on the Bear Lake Grazing Company (BLGC) property, were permitted in exchange for allowing BLGC to graze livestock on the Department's Blackfoot River WMA. The purpose of the surveys was to document status of potential spawning and rearing habitat for Yellowstone cutthroat trout *Oncorhynchus clarki bouvieri*. The information was used to inform the landowners of problems and to make recommendations to them for changes to improve water quality and riparian habitat.

Authors:

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IDAHO
DEPARTMENT OF FISH AND GAME

Rod Sando, Director

FEDERAL AID IN FISH RESTORATION
1999 Job Performance Report
Program F-71-R-24

REGIONAL FISHERIES MANAGEMENT INVESTIGATIONS
UPPER SNAKE REGION (Subprojects I-G, II-G, III-G, IV-G)

PROJECT I.	SURVEYS AND INVENTORIES
Job a.	Upper Snake Region Mountain Lakes Investigations Stocking
Job b.	Upper Snake Region Lowland Lakes Investigations Island Park Reservoir, Henrys Lake
Job c[1].	Upper Snake Region Rivers and Streams Investigations
Job c[2].	Henrys Fork Snake River, Buffalo River, Willow Creek Investigations
PROJECT II.	TECHNICAL GUIDANCE
PROJECT III.	HABITAT MANAGEMENT
PROJECT IV.	LAKE REHABILITATION

By

Jeff Dillon, Regional Fishery Biologist
Mark Gamblin, Regional Fishery Manager
William C. Schrader, Senior Fishery Research Biologist

1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-G Upper Snake Region
Job:	a	Title:	Mountain Lakes Investigations

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Regional personnel used gillnetting and angling gear to sample fish in Divide Creek Lake. We were unsuccessful in sampling trout with two net-nights of gill net sampling. We suspect that trout avoidance of our standard gill nets is preventing effective sampling of mountain lake trout populations. Scale and otolith samples were collected from only four cutthroat trout *Oncorhynchus clarki* captured by recreational anglers. We found no spotted frogs *Rana luteiventris* in the Divide Creek Lake basin.

This was our third year of effort at building a database on fish growth and size structure, and amphibian presence/absence in Upper Snake Region mountain lakes. As the database develops, we will use the information to modify stocking programs where appropriate. The mountain lake database will be summarized in a future report.

Authors:

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1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-G Upper Snake Region
Job:	b	Title:	Lowland Lakes Investigations - Island Park Reservoir, Henrys Lake

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Gill net catch composition on Island Park Reservoir in May was 62% non-game fish (Utah chubs *Gila atraria*, Utah suckers *Catostomus ardens*, and redside shiners *Richardsonius balteatus)*. Hatchery and wild rainbow trout *Oncorhynchus mykiss* comprised 23% and splake (lake trout *Salvelinus namaycush* x brook trout *S. fontinalis*) 8% of the total catch. Kokanee salmon *O. nerka*, brook trout, and mountain whitefish *Prosopium williamsoni* accounted for 7% of the catch.

The 1999 spawning operations at Henrys Lake produced 1,851,400 eyed Yellowstone cutthroat trout *O. clarki bouvieri* eggs and 265,700 eyed Yellowstone cutthroat-rainbow trout hybrid eggs. All hybrid eggs were heat-shocked to produce sterile triploids. Yellowstone cutthroat trout in the Hatchery Creek run averaged 435 mm and hybrid trout averaged 442 mm. No brook trout eggs were taken in 1999. Catch composition in six net nights of gillnetting at Henrys Lake was 42% cutthroat trout, 29% hybrid trout, 21% brook trout, and 8% Utah chubs.

Pathology tests detected *Myxobolus cerebralis* in seven of 12 five-fish pooled samples in Henrys Lake cutthroat trout in 1999.

Preliminary genetic analyses of phenotypically identified cutthroat trout sampled throughout the 1999 Henrys Lake hatchery run suggest these fish are not significantly introgressed with rainbow trout. Naturally produced juvenile cutthroat trout from five Henrys Lake tributaries show a range of introgression with rainbow trout. Additional genetics analyses are ongoing.

Estimated total angling effort on Henrys Lake was 228,000 hours in 1999. Total catch rate was 0.65 fish/h. Estimated harvest was 27,355 fish comprised of 22% cutthroat trout, 65% hybrid trout, and 13% brook trout. The proportion of brook trout in the harvest was the highest since 1982.

Authors:

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Regional Fishery Manager

1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-G Upper Snake Region
Job:	c[1]	Title:	Rivers and Streams Investigations - South Fork Snake River

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

In the South Fork Snake River, a total of 2,876 individual trout were captured during four days of electrofishing at the Conant section in October 1999. Trout species composition and relative abundance were wild and hatchery cutthroat trout *Oncorhynchus clarki* (63%), wild rainbow *O. mykiss* and hybrid *O. clarki x O. mykiss* trout (19%), and wild brown trout *Salmo trutta* (18%). At Lorenzo, a total of 1,431 individual trout were captured during four days of electrofishing in September and October 1999. Trout species composition and relative abundance were wild cutthroat trout (23%), wild rainbow and hybrid trout (<1%), and wild brown trout (76%). No lake trout *Salvelinus namaycush* or kokanee salmon *O. nerka kennerlyi* were captured at either section.

At Conant, brown trout relative abundance has varied from 7% to 21% since 1982, the first year of electrofishing. There is no apparent trend. Cutthroat trout relative abundance was nine percentage points higher than in 1997, the all time low. In contrast, rainbow and hybrid trout relative abundance was eight points lower than in 1997, the all time high.

At Lorenzo, brown trout relative abundance has varied from 61% to 76% since 1987, the first year of electrofishing, and was highest on record in 1999. Cutthroat trout relative abundance has varied from 23% to 38%, and was lowest on record in 1999. Rainbow and hybrid trout relative abundance has remained below 2% and there is no apparent trend.

Average length at Conant was 309 mm for wild and hatchery cutthroat trout, 313 mm for rainbow and hybrid trout, 293 mm for brown trout, and 307 mm for all species combined. Quality Stock Density (QSD) was 2.6% for wild and hatchery cutthroat trout, 11.6% for rainbow and hybrid trout, 9.1% for brown trout, and 5.5% for all species combined. Average length at Lorenzo was 334 mm for wild cutthroat trout, 350 mm for rainbow and hybrid trout, 272 mm for brown trout, and 287 mm for all species combined. The QSD for wild cutthroat trout was 8.0%, 0.0% for rainbow and hybrid trout, 7.8% for brown trout, and 7.8% for all species combined.

At Conant, estimated density of age-1 and older fish was 259 fish/ha for wild and hatchery cutthroat trout, 92 fish/ha for rainbow and hybrid trout, 72 fish/ha for brown trout, and 396 fish/ha for all species combined. At Lorenzo, estimated density of age-1 and older fish was 70 fish/ha for wild cutthroat trout, 255 fish/ha for brown trout, and 324 fish/ha for all species combined. Density was not estimated for rainbow and hybrid trout due to their small sample size and no recaptures.

Rainbow and hybrid trout were removed during Conant and Lorenzo recapture runs and either transplanted into Gem Lake (109 fish), Rexburg Kid's Pond (133 fish), or killed (4 fish).

Authors:

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1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-G Upper Snake Region
Job:	c^2	Title:	Rivers and Streams Investigations - Henrys Fork Snake River, Buffalo River, Willow Creek

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

An electrofishing survey on the Box Canyon Reach of the Henrys Fork Snake River provided a population estimate of 4,807 wild rainbow trout *Oncorhynchus mykiss* over 6 inches (150 mm) in length. This is 72% of the 1998 estimate, but is higher than the 1996 estimate. Quality Stock Density (QSD) (406mm) was 14.8%, slightly higher than estimates for 1997 and 1998.

Electrofishing samples in the Henrys Fork below St. Anthony were 7.5% wild rainbow trout, 5.6% brown trout *Salmo trutta*, and 57.6% mountain whitefish *Prosopium williamsoni*. Non-game fish comprised 30% of the total catch. Rainbow trout ranged in size from 160 mm to 530 mm, and brown trout from 180 mm to 470 mm. Length frequencies suggest that little spawning occurs in this section of the Henrys Fork.

Henrys Fork Foundation staff conducted a creel survey on the upper Henrys Fork. Anglers fished an estimated 17,575 hours from the confluence of Big Springs and Henrys Lake Outlet to Coffee Pot Rapids. They caught an estimated 23,770 fish and harvested 3,370. Release rates averaged 86%. Based on fish identified in the creel, the estimated harvest of hatchery catchable rainbow trout was 814, a 6% return to creel. Including caught and released fish; angler utilization of hatchery rainbow trout likely approached 40%. We suspect these estimates are biased by incorrect classification of hatchery/wild rainbow trout.

An estimated 56 rainbow trout, including 27 adult spawners >406mm, ascended the Buffalo River fish ladder from February 1 to April 3, 1999. This compares to 252 total fish and 38 adult spawners>406mm over the same time period in 1998. Attempts to estimate total emigration of juvenile rainbow trout into Box Canyon were unsuccessful.

We continued efforts to monitor Yellowstone cutthroat *Oncorhynchus clarki bouvieri* in the Willow Creek drainage. In 1999 we sampled three tributaries and one mainstem site, for a total of nine sites in the last two years. In eight of the nine sites, Yellowstone cutthroat densities were substantially lower than in the early 1980s.

Authors:

Jeff Dillon
Regional Fishery Biologist

Mark Gamblin
Regional Fishery Manager

1999 ANNUAL PERFORMANCE REPORT

State of: Idaho Program: Fisheries Management F-71-R-24

Project II: Technical Guidance Subproject: II-G Upper Snake Region

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Technical guidance was provided to federal, state, county, municipal, and private agencies/entities upon request. Technical guidance was also provided to organized sportsmen groups, conservation organizations, and private citizens in the form of fish pond development, stocking and management advice, funding requests and project feasibility opinions, and various conservation and educational programs.

Upper Snake Region fishery management staff provided technical assistance and guidance to the following government agencies and private groups:

Bingham County
Henrys Fork Foundation
Island Park Sportsmen Association
Sheridan Creek Restoration Committee
Henrys Fork Watershed Council
Idaho Water Resource Board
Upper Snake River Fly Fishers
Snake River Cutthroats (TU chapter)
U.S. Fish and Wildlife Service
Jackson National Fish Hatchery
U.S. Forest Service
U.S. Bureau of Land Management
City of Rexburg
North Fork Reservoir Company
Palisades Creek Canal Company
South Fork WAG
Fall River Rural Electric Cooperative
The Nature Conservancy
Region 6 Wildlife Council
Idaho Department of Parks and Recreation
Idaho Department of Water Resources
Idaho Department of Lands
U.S. Bureau of Reclamation
HFWC Water Quality Subcommittee
City of Idaho Falls
Teton Regional Land Trust
Wyoming Game and Fish Department
INEEL
Bonneville County
Fremont County
HFWC Cutthroat Trout Subcommittee
Idaho Department of Environmental Quality
U.S. Natural Resources Conservation Service
One Fly Committee
PacifiCorp
Idaho Fish and Wildlife Foundation

We responded to numerous requests for technical assistance and permit processing by private pond owners. Particular attention was given to private pond permit applications in the South Fork Snake River, Willow Creek, Teton River and Henrys Lake watersheds, where native Yellowstone cutthroat trout *Oncorhynchus clarki bouvieri* management goals might conflict with private requests to stock rainbow trout in those watersheds. The regulation of fish stocking in private ponds is a growing issue requiring an increasing amount of staff attention.

We gave numerous informational presentations to sporting groups and responded to public concerns and questions about cutthroat trout conservation measures implemented in the region.

Regional fishery management personnel contributed over 100 man-days to technical guidance requests in 1999.

Author:

Mark Gamblin
Regional Fishery Manager

1999 ANNUAL PERFORMANCE REPORT

State of: Idaho Program: Fisheries Management F-71-R-24

Project III: Habitat Management Subproject: III-G Upper Snake Region

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Regional personnel conducted routine maintenance and repair operations on Henrys Lake riparian fence and irrigation diversion fish screens and Palisades Creek and Burns Creek irrigation diversion fish screens.

Idaho Department of Fish and Game (Department) Engineering Bureau work crews completed construction of a new irrigation diversion structure and fish ladder on Palisades Creek. This structure will be used to manage escapement of spawning trout from the South Fork Snake River into Palisades Creek to conserve Yellowstone cutthroat trout *Oncorhynchus clarki bouvieri* genetic integrity in the South Fork Snake River.

Department Engineering Bureau work crews completed a stream channel stabilization project on Sellars Creek and started preliminary design and planning work on a similar project on Burns Creek. The Sellars Creek project restores passage for spawning Yellowstone cutthroat trout from Willow Creek to upper Sellars Creek.

Author:

Mark Gamblin
Regional Fishery Manager

1999 ANNUAL PERFORMANCE REPORT

State of: Idaho Program: Fisheries Management F-71-R-24

Project IV: Lake Rehabilitation Subproject: IV-G Upper Snake Region

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

In October, approximately 270 game fish, including 17 cutthroat trout *Oncorhynchus clarki*, one rainbow *O. mykiss* - cutthroat hybrid trout, 153 brown trout *Salmo trutta*, 153 lake trout *Salvelinus namaycush*, and fewer than 100 mountain whitefish *Prosopium williamsoni* were salvaged from the Palisades Dam stilling basin and released to the South Fork Snake River immediately below the stilling basin. The number and size distribution of lake trout sampled again confirm this species is reproducing naturally in Palisades Reservoir. Personnel of the U.S. Bureau of Reclamation assumed responsibility for the salvage effort, under the direction of Idaho Department of Fish and Game (Department) regional fisheries management personnel.

Mud Lake was stocked with 50,000 Lahontan cutthroat trout *Oncorhynchus clarki henshawi* in October. We stocked 11 mountain lakes with a total of 14,500 cutthroat trout in September. All fish were reared at Mackay Hatchery and were stocked by Department personnel and volunteers via foot, motorcycle, or horseback.

Golden Lake and the remainder of the Thurmon Creek drainage upstream were treated with Fintrol (Antimycin A) to eradicate populations of rainbow trout and brook trout *S. fontinalis*, preparatory to restocking those waters with Yellowstone cutthroat trout *O. clarki bouvieri*.

Authors:

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IDAHO
DEPARTMENT OF FISH AND GAME

Rod Sando, Director

FEDERAL AID IN FISH RESTORATION
1999 Job Performance Report
Program F-71-R-24

REGIONAL FISHERIES MANAGEMENT INVESTIGATIONS
SALMON REGION (Subprojects I-H, II-H, III-H)

PROJECT I. SURVEYS AND INVENTORIES
- Job a[1]. Salmon Region Mountain Lakes Investigations Stocking
- Job a[2]. Salmon Region Mountain Lakes Investigations - Carlson Lake Population Control
- Job a[3]. Salmon Region Mountain Lakes Investigations
- Job b. Salmon Region Lowland Lakes Investigations - Yankee Fork, Kelly Creek and Squaw Creek Ponds Studies
- Job c[1]. Salmon Region Rivers and Streams Investigations - Middle Fork Salmon River Snorkeling Transects
- Job c[2]. Salmon Region Rivers and Streams Investigations - Wild Trout Population Surveys - Canyon Creek and Tributaries
- Job c[3]. Salmon Region Rivers and Streams Investigations - Wild Trout Population Surveys – Big Springs Creek
- Job c[5]. Salmon Region Rivers and Streams Investigations - Valley Creek Brook Trout Reduction

PROJECT II. TECHNICAL GUIDANCE
PROJECT III. HABITAT MANAGEMENT

By

Tom Curet, Regional Fishery Biologist
Mike Larkin, Regional Fishery Manager
Ryan Newman, Fishery Technician
Steve Meyer, Fishery Technician
Steve Kish, Fishery Volunteer

1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-H Salmon Region
Job:	a[1]	Title:	Mountain Lake Investigations - Stocking

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

In summer 1999, the Idaho Department of Fish and Game (Department) stocked 79 mountain lakes in the Salmon Region, 62 by plane and 17 by foot. We stocked 57,150 fry in Salmon-Challis National Forest lakes, including 47,650 westslope cutthroat trout *Oncorhynchus clarki lewisi*, and 9,500 sterile rainbow trout *O. mykiss*. The Department used a Cessna-185 fixed-wing aircraft at a cost of $21.17 per lake.

Authors:

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Mike Larkin
Regional Fishery Manager

Ryan Newman
Fishery Technician

1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-H Salmon Region
Job:	a^2	Title:	Mountain Lake Investigations - Carlson Lake Population Control

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

In May 1999, project personnel gill netted and removed stunted brook trout *Salvelinus fontinalis* from Carlson Lake to increase the mean size of the population. We removed 1,151 brook trout during 386.1 diel net hours. Since 1997, 3,428 brook trout have been removed. Average total length of brook trout has increased only 6 mm; however, there has been an obvious improvement in the condition factor of the fish.

Authors:

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Steve Meyer
Fishery Technician

1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-H Salmon Region
Job:	a^3	Title:	Mountain Lakes Investigations

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Project personnel surveyed 35 mountain lakes in the Salmon Region during July and August 1999. All lakes were within the Salmon-Challis National Forest. Surveys measured use, status of fishery, fish population, natural recruitment potential, and past stocking strategies.

Authors

Tom Curet
Regional Fishery Biologist

Mike Larkin
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Ryan Newman
Fishery Technician

1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-H Salmon Region
Job:	b	Title:	Lowland Lakes Investigations - Yankee Fork, Kelly Creek, and Squaw Creek Ponds Studies

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Project staff investigated concerns of the Shoshone-Bannock Indian Tribes that catchable rainbow trout *Oncorhynchus mykiss* stocked in Yankee Fork Salmon River ponds were preying on and/or displacing wild chinook salmon *O. tshawytscha*. We noted no measurable displacement of chinook salmon during intensive diel snorkel efforts. Analysis of 162 catchable rainbow trout stomachs showed no fish or fish parts, indicating catchable rainbow trout did not prey on chinook salmon.

We studied direct angling effort on Kelly Creek Pond, Squaw Creek Pond and the Yankee Fork Pond series. Weekend days received greater angler effort than weekdays, with the greatest effort in July and the lowest effort in August. The Yankee Fork Pond series received the greatest effort. Local anglers (those from Custer County) accounted for only six percent of the effort on all ponds, while non-residents accounted for 34% of the total effort.

Authors:

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Steve Kish III
Fishery Volunteer

1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Project:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-H Salmon Region
Job No:	c[1]	Title:	Rivers and Streams Investigations - Middle Fork Salmon River Snorkeling Transects

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

In August 1999, project personnel used snorkeling and angling to sample 29 Middle Fork Salmon River transects and nine tributary sites for fish presence and density. Mean densities of age-1 and older westslope cutthroat trout *Oncorhynchus clarki lewisi*, juvenile rainbow/steelhead trout *O. mykiss*, and juvenile chinook salmon *O. tshawytscha* counted in Middle Fork Salmon River transects were 1.65, 0.89, and 2.41 fish/100 m^2, respectively. In Middle Fork Salmon River tributary transects, westslope cutthroat trout densities averaged 1.13/100 m^2, rainbow trout/steelhead averaged 3.79/100 m^2, and chinook salmon averaged 3.37/100 m^2.

Authors

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Fishery Technician

1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fishery Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-H Salmon Region
Job:	c^2	Title:	Rivers and Streams Investigations - Wild Trout Population Surveys - Canyon Creek and Tributaries

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

In the spring of 1999 the Lemhi Model Watershed Project reconnected Canyon Creek to the Lemhi River and installed an improved sprinkler system on adjacent private property to prevent dewatering of the creek during the irrigation season.

During the fall of 1998 and summer and fall of 1999 project personnel sampled Canyon Creek and several tributary streams to determine fish species composition, size structure, and abundance. We saw rainbow trout *Oncorhynchus mykiss* in Canyon and Cruikshank creeks; however, we saw only westslope cutthroat trout *O. clarki lewisi* in Wildcat and Frank Hall creeks. Rainbow trout were the dominant salmonid species in Canyon Creek during the summer and fall. Westslope cutthroat trout appear to overwinter in Canyon Creek before moving into adjacent tributaries during the spring and summer.

Project personnel will survey Canyon Creek annually to monitor changes in the fish community after the reconnection to the Lemhi River.

Authors:

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Steve Meyer
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1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fishery Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-H Salmon Region
Job:	c^3	Title:	Rivers and Stream Investigations - Wild Trout Population Surveys - Big Springs Creek

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Project personnel conducted rainbow trout *Oncorhynchus mykiss* spawning ground surveys on the upper Lemhi River to monitor the effects of fishing regulation changes and habitat improvement projects sponsored by the Lemhi Model Watershed Project. We noted a substantial increase in overall counts in 2000 compared to previous years.

Authors:

Tom Curet
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Regional Fishery Manager

1999 ANNUAL PERFORMANCE REPORT

State of:	Idaho	Program:	Fisheries Management F-71-R-24
Project I:	Surveys and Inventories	Subproject:	I-H Salmon Region
Job:	c^5	Title:	Rivers and Streams Investigations - Valley Creek Brook Trout Reduction

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Since 1995, Idaho Fish and Game Department (Department) personnel have electrofished and removed 25,737 brook trout *Salvelinus fontinalis* from Valley Creek in order to open habitat for native fishes. To reestablish native fishes, we have stocked 102,902 native bull trout *S. confluentus*, westslope cutthroat trout *Oncorhynchus clarki lewisi,* and rainbow trout/westslope cutthroat trout hybrids from adjacent watersheds.

Members of the Shoshone-Bannock Indian Tribes snorkeled in Valley Creek and found that brook trout densities have declined substantially since we began reduction efforts. However, there has not been a corresponding increase in numbers of native fish. Throughout the drainage native fishes are present in low numbers in areas that previously contained only brook trout. We believe that it will take more time before increases in native fish populations are apparent.

Authors:

Tom Curet
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Mike Larkin
Regional Fishery Manager

1999 ANNUAL PERFORMANCE REPORT

State of: Idaho Program: Fishery Management F-71-R-24

Project II: Technical Guidance Subproject: II-H Salmon Region

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

During 1999, project staff provided technical assistance, as time allowed, to all requesting state and federal agencies. We submitted comments to agencies and private entities concerning stream alterations, bank stabilization, mining operations and reclamation plans, fish rearing proposals, private ponds, water right applications, grazing allotments, timber sales, highway reconstruction, habitat improvements, bridge reconstruction, and hydropower projects. We also conducted on-site inspections of proposed, on-going and completed projects.

Idaho Department of Fish and Game (Department) personnel participated in angler informational meetings, school presentations, multi-agency and private landowner collaborative groups, and the 1-800-ASK-FISH program. Of the estimated 45,000 anglers that fish in the Salmon region, approximately 90% live outside the area. Because these anglers are not familiar with our waters, we responded to over 2,500 requests for basic information on fishing opportunities, techniques, regulations and area specifics.

Authors:

Mike Larkin
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Regional Fishery Biologist

1999 ANNUAL PERFORMANCE REPORT

State of: Idaho Program: Fishery Management F-71-R-24

Project III: Habitat Management Subproject: III-H Salmon Region

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

During 1999, project personnel completed construction of an urban fishing pond in Challis. We obtained $50,000 from Bonneville Power Administration (BPA) for work on a 12-mile reach of the Salmon River near Challis. We contracted for a detailed river study through the University of Idaho, Boise Eco-hydraulics office. A Master's Degree candidate should complete the study in spring 2000.

Fisheries staff continued work on habitat restoration projects with the Idaho Department of Fish and Game Fish Screen Program, the Natural Resource Conservation Service, and the Lemhi Model Watershed Program. We completed nine projects with the Lemhi Model Watershed Program involving stream bank stabilization and riparian fencing. Canyon Creek, a small tributary stream near Leadore, was reconnected to the Lemhi River.

We are helping write a proposal to reconnect Falls Creek to the Pahsimeroi River in cooperation with four ranchers. Another proposal to convert to sprinkler irrigation on two ranches in the lower Pahsimeroi River will restore fish access to about 3 miles of habitat and eventually open up an additional 12.5 miles of habitat in Big Springs Creek.

Authors:

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IDAHO
DEPARTMENT OF FISH AND GAME

Rod Sando, Director

Federal Aid in Sport Fish Restoration
1999 Annual Performance Report
Program F-71-R-24

REGIONAL FISHERIES MANAGEMENT INVESTIGATIONS

PROJECT IV. LAKE REHABILITATION

By

Bill Hutchinson, State Fishery Manager
William D. Horton, Resident Fishery Coordinator

1999 ANNUAL PERFORMANCE REPORT

State of: Idaho Program: Fishery Management F-71-R-24

Project IV: Lake Rehabilitation

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

Population management coordination included work to publish the "Rotenone Use in Fisheries Management, Administrative and Technical Fisheries Manual" through the American Fisheries Society and a Federal Aid Grant.

Renovation projects included Thurmon Creek drainage and Golden Lake in the Upper Snake Region, and Claytonia Pond in the Southwest Region. The goal was to enhance Yellowstone cutthroat trout *Oncorhynchus clarki bouvieri* in the Upper Snake Region and to remove carp from Claytonia Pond to improve water quality and habitat for a warm water sport fishery.

Authors:

Bill Hutchinson
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IDAHO
DEPARTMENT OF FISH AND GAME

Rod Sando, Director

Federal Aid in Sport Fish Restoration
1999 Annual Performance Report
Program F-71-R-24

REGIONAL FISHERIES MANAGEMENT INVESTIGATIONS

PROJECT V. REGIONAL COORDINATION AND ASSISTANCE

By

Bill Hutchinson, State Fishery Manager
William D. Horton, Resident Fishery Coordinator

1999 ANNUAL PERFORMANCE REPORT

State of: Idaho Program: Fishery Management F-71-R-24

Project V: Regional Coordination and Assistance

Contract Period: July 1, 1999 to June 30, 2000

ABSTRACT

The State Fishery Manager and the Resident Fishery Coordinator provided program guidance, coordination, and assistance to fisheries management personnel in the Department's seven regions. They also prepared and submitted grants for Federal Aid in Sport Fish Restoration, consulted with the U.S. Fish and Wildlife Service on Sections 6 and 10 of the Endangered Species Act, and submission of the Department's Bull Trout Conservation Program Plan.

Coordination and assistance was also provided through annual work plan meetings, a three-day Fishery Manager Coordination meeting, Region-Fishery Bureau Coordination meetings, Regional Fishery Biologist Training Meeting, numerous small meetings, and review and publication of Federal Aid reports. Interstate management coordination included meetings with bordering fish and wildlife agencies, other Idaho state agencies, the U.S. Fish and Wildlife Service, and the Columbia Basin Fish and Wildlife Authority-Resident Fish Committee.

The Bureau of Fisheries also coordinated the issuance of 182 permits for fishing tournaments. Mandatory report forms for these tournaments have been filed for future trend analysis. Scientific collecting permits were issued to approximately 221 individuals for the study of aquatic species. Most investigators receiving collecting permits are resource agency biologists; however, university students and professors, utility companies, timber companies, Indian tribes, and consultants also received permits. Reports from these permits are used for fish population information, species distribution data, Endangered Species Act accounting, and general fisheries management information.

Authors:

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Submitted by:

See individual abstracts

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IDAHO DEPARTMENT OF FISH AND GAME

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